

Amendments to the Claims

1. **(Currently Amended)** A substrate polishing apparatus characterized by comprising:

a rotatable polishing table against which a substrate is pressed, said rotatable polishing table having a fluid chamber at a light-emitting and light receiving position thereof;

a light-emitting and light-receiving device to emit measurement light from said rotatable polishing table to said the substrate and to receive reflected light from said the substrate for measuring a film formed on said the substrate;

a fluid supply passage for supplying a fluid for measurement to a said fluid chamber provided at a light emitting and light receiving position of said rotatable polishing table, said the measurement light and said the reflected light passing through said the fluid for measurement; and

a rotational angle sensor for detecting an angular position of said rotatable polishing table in a rotational direction of said rotatable polishing table; and

a fluid supply control device for controlling supply of said the fluid for measurement to said fluid chamber according to a positional relationship between said fluid chamber and the substrate which is detected by said rotational angle sensor.

Claim 2 (Cancelled)

3. **(Currently Amended)** The substrate polishing apparatus as recited in claim 1, characterized in that wherein said fluid supply control device ejects said the fluid for measurement to said fluid chamber during a blocking period during which said fluid chamber is blocked by said the substrate.

4. **(Currently Amended)** The substrate polishing apparatus as recited in claim 3, characterized in that wherein during an unblocking period during which said fluid chamber is not blocked by said the substrate, said fluid supply control device supplies

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| said the fluid for measurement to said fluid chamber at a flow rate lower than a flow rate
| during ejection.

5. **(Currently Amended)** The substrate polishing apparatus as recited in claim
1, ~~characterized by~~ further comprising a compulsory discharge control device for
controlling compulsory discharge of a fluid in said fluid chamber according to the
positional relationship between said fluid chamber and ~~said the substrate which is~~
detected by said rotational angle sensor.

6. **(Currently Amended)** The substrate polishing apparatus as recited in claim
5, ~~characterized in that~~ wherein said compulsory discharge control device compulsorily
discharges the fluid in said fluid chamber during a blocking period during which said
fluid chamber is blocked by ~~said~~ the substrate.

7. **(Currently Amended)** The substrate polishing apparatus as recited in claim
6, ~~characterized in that~~ wherein said compulsory discharge control device continues
compulsory discharge of the fluid in said fluid chamber during a predetermined post-
blocking period after ~~said~~ the blocking period is completed.

8. **(Currently Amended)** The substrate polishing apparatus as recited in claim
5, ~~characterized in that~~ wherein said compulsory discharge control device restricts
compulsory discharge of the fluid in said fluid chamber during a predetermined pre-
blocking period before said fluid chamber is blocked by ~~said~~ the substrate.

9. **(Currently Amended)** A substrate polishing apparatus ~~characterized by~~
comprising:

a rotatable polishing table against which a substrate is pressed, said rotatable
polishing table having a fluid chamber provided at a light emitting and light-receiving
position thereof;

a light-emitting and light-receiving device to emit measurement light from said rotatable polishing table to said the substrate and to receive reflected light from said the substrate;

a first passage for ejection a high flow rate, said first passage introducing a fluid, through which said the measurement light and said the reflected light pass, to a said fluid chamber provided at a light emitting and light receiving position of said rotatable polishing table;

a second passage for a low flow rate, said second passage being restricted as compared to said first passage for ejection the high flow rate which introduces said the fluid to said fluid chamber; and

a rotational angle sensor for detecting an angular position of said rotatable
polishing table in a rotation direction of said rotatable polishing table; and

a switching device unit for switching into which of said first and second passages
into which said the fluid is introduced based on a detection signal of said rotational angle
sensor.

Claims 10-20 (Cancelled)

21. **(New)** The substrate polishing apparatus as recited in claim 1, wherein said fluid supply passage includes a passage for a high flow rate and a passage for a low flow rate which are connected to said fluid chamber.

22. **(New)** The substrate polishing apparatus as recited in claim 1, wherein the measurement light and the reflected light pass through the fluid for measurement along a direction parallel to a direction in which the fluid for measurement flows.

23. **(New)** The substrate polishing apparatus as recited in claim 9, wherein said first passage and said second passage are connected to said fluid chamber.

24. **(New)** The substrate polishing apparatus as recited in claim 9, wherein the measurement light and the reflected light pass through the fluid for measurement along a direction parallel to a direction in which the fluid flows.